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RESEARCH PAPER

Resource productivity and resource use efficiency in cocoon production

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ABSTRACT

Investigation was carried out during the year 2010-11. About 60 sericultural producers were randomly selected from ten villages of two tehsils of Osmanabad district of Maharashtra. Cross sectional data were collected from sericultural producers with the help of pretested schedule by personal interview method. The study was conducted to know the elasticity of production, resource productivity and resource use efficiency in cocoon production. Cobb-Douglas production function was fitted to the data. The results revealed that regression co-efficient of disease free layings (0.042) and disinfecting material (0.229) were positive and significant. Regression co-efficient with respect to batches under cocoon production was 0.048 followed by that of hired human labour (0.105), family human labour (0.170), mulberry leaves (0.257) and electricity (0.025) which were positive but non-significant. The sum of production elasticities (∑bi) was 0.876 which indicated decreasing return to scale.

KEY WORDS : Silkworm, Cocoon, Resource productivity, Marginal product, Optimum resource

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Sericulture is an art of rearing silkworm for the production of cocoons which is the raw material for the production of silk. India is the second largest producer of raw silk in the world next to China. In Maharashtra, climate of Osmanabad district is favourable for silkworm rearing. Sericultural producer rearing silkworms in a year as three to four generations that can be known as crops or batches. Generally, bivoltine cocoon which is of white colour is produced by using mulberry leaves.

Disease free layings is a square on a egg card which consits with 500 eggs. It means that one egg card has 10000 eggs. Batch is a lot or crop with duration of 45 to 50 days in cocoon production. In one batch 200 disease free layings are used for rearing. Thus, about 800 disease free layings (DFLs) can be used for cocoon production in a year. In cocoon production business batches under cocoon production, hired human labour, family human labour, disease free layings, mulberry leaves, disinfecting material and electricity are equally important resources. In production process, some of the resources are either over utilization or under utilization. Keeping in view the above aspect, the present study was undertaken in order to determine the optimum utilization of resources in cocoon production business.

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METHODOLOGY

Multistage sampling design was adopted for the selection of district, tahsils, villages and sericultural producers. In the first stage, Osmanabad district was purposively selected because of more sericultural producers. In the second stage, Kalam and Osmanabad tahsils of Osmanabad district were selected on the basis of highest number of sericultural producers. In the third stage, five villages namely, Dhoki, Palaswadi, Tadwala, Wagholi and Warwanti were selected from